



THE PRIME EXAMINATIONS 2024

P.7 MAGIC SET IV

MATHEMATICS

Time allowed 2 hours 30 minutes

INDEX NO:

Candidate's Name:

Candidate's Signature:

District ID No.:



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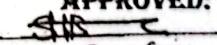
READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. Do not write your school or district name anywhere on this paper.
2. This paper has two sections: A and B Section A has 20 questions and section B has 12 questions. The paper has 9 printed pages.
3. Answer all questions. All the working for both sections A and B must be shown in the spaces provided.
4. All working must be done using a blue or black ball point pen or ink. Any work done in pencil other than graphs and diagrams will not be marked.
5. No calculators are allowed in the examination room.
6. Unnecessary changes in your work and handwriting that cannot easily be read may lead to loss of marks.
7. Do not fill anything in the table indicated "For Examiners' use only", and those boxes inside the question paper.

FOR EXAMINERS' USE ONLY

QUESTION NUMBER	MARKS ATTAINED	INITIALS
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

APPROVED:

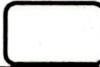

Consultant

Mathematics Department (PEC)

PUBLISHERS OF: -

THE PRIME SCHEMING FRAME WORKS, PUPILS' WORKBOOKS, LESSON COURSE BOOKS,
HOLIDAY PACKAGES, LEARNING GAMES AND MORE...

Section A (40 Marks)

1 Workout: $496 + 23$	2 Write 110372 in words.
3 Given that set M = {6, 5, 7, 8, 9, 10, 11} and set N = {1, 2, 3, 4, 5, 6, 7} find n(MUN)	4 Work out: $1\frac{2}{7} \times \frac{4}{5}$
5 Simplify: $3x - 4y + 5x - 7y$	6 Find the next number in the sequence below. 576, 36, 4, 1, _____ <div style="text-align: center; margin-top: 10px;">  </div>
7 Using a ruler, a pencil and a pair of compasses, construct an angle of 105° .	

<p>8 The cost of 3 books is sh 7,500. Find the cost of 7 similar books.</p>	<p>9 Convert 0.907kg to grammes.</p>																		
<p>10 Subtract $414_{\text{five}} - 343_{\text{five}}$</p>	<p>11 Given that $a = -3$, $b = 3$ and $c = 2$. Find the value of $ab - c$</p>																		
<p>12 Today is Monday, what day of the week was it 35 days ago?</p>	<p>13 Express 679.3 in standard form.</p>																		
<p>14 The graph below shows the journeys made a motorist and cyclist.</p>	<table border="1"> <caption>Data points estimated from the graph</caption> <thead> <tr> <th>Time (hours)</th> <th>Cyclist Distance (km)</th> <th>Motorist Distance (km)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td></tr> <tr><td>1</td><td>40</td><td>20</td></tr> <tr><td>2</td><td>80</td><td>40</td></tr> <tr><td>3</td><td>120</td><td>60</td></tr> <tr><td>4</td><td>160</td><td>80</td></tr> </tbody> </table>	Time (hours)	Cyclist Distance (km)	Motorist Distance (km)	0	0	0	1	40	20	2	80	40	3	120	60	4	160	80
Time (hours)	Cyclist Distance (km)	Motorist Distance (km)																	
0	0	0																	
1	40	20																	
2	80	40																	
3	120	60																	
4	160	80																	

How many more hours did the motorist take on his journey than the cyclist?

15.

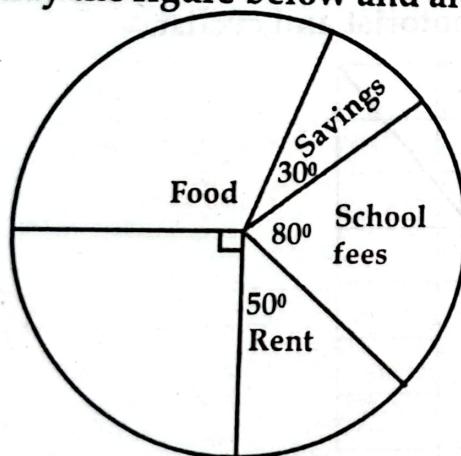
The bearing from Apac to Mbale is 130° . Find the bearing of Apac from Mbale.

16

The speed of a bus is 84km/hr. What distance will the bus have covered in $3\frac{1}{2}$ hr?

17

Study the figure below and answer the questions that follow.



Find the degrees that represent food.

18

Convert 14 30 hr to 12 hour clock system.

19

Kamwenge deposited sh 800,000 in a bank at a rate of 15% per annum for 24 months. Find the simple interest he earned.

20 Work out: $2^2 \times 2^{8x} = 2^{-3}$

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Section B (60 Marks)

21 Given the numeral 40725.

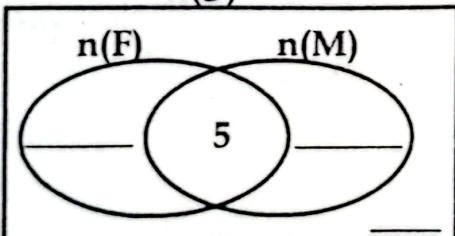
(a) What is the place value of 0 in the numeral above? (01 marks)

(b) Find the difference between the value of 4 and the value of 7. (03 marks)

22 At a party attended by 28 guests, 16 drank Fanta (F), 15 drank Mirinda (M), 5 drank both Fanta and Mirinda. If (p - 1) drank none of the drinks.

(a) Show the above information on a Venn diagram below. (03 marks)

$$n(\mathcal{E}) =$$



(b) How many guests drank none of the drinks? (03 marks)

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23

Sseremba went shopping and bought the following items.

3kg of meat at sh 12,000 per kg

2 $\frac{1}{2}$ kg of rice at sh 4,000 per kg

500gm of beans at sh 3,000 per kg

4 litres of cooking oil at sh 14,000

(a) Find Sseremba's total expenditure.

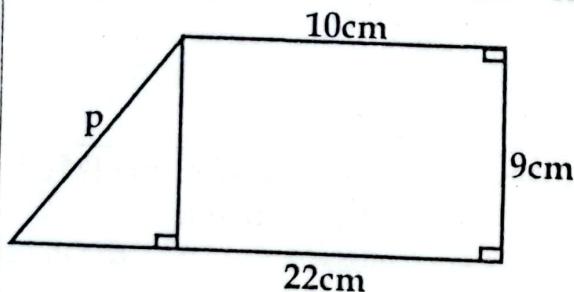
(04 marks)

(b) If Sseremba had 4 notes of sh 20,000 each. Find his change.

(01 mark)

24

Study the figure below and answer the questions that follow.



(a) Find the side marked p. (02 marks)

(b) Work out the distance around the figure.

(01 mark)

(c) Find the area of the figure.

(02 marks)

- WARNING: Not to be reproduced electronically!!**
- 25 (a) Work out: 0.096×0.12 (03 marks)
 0.08×0.6
- (b) Simplify: $\frac{8}{9} \div \frac{1}{2} \times \frac{2}{3}$ (03 marks)
- 26 Using a ruler, a pencil and a pair of compasses, construct a parallelogram EFGH in which EF = 7cm, FG = 5.0cm and angle EFG = 120°. Drop a perpendicular from H to meet EF at O. (05 marks)
- 27 The time table shows the journey made by a train from Kampala to Tororo.
- | Place | Arrival time | Departure time |
|---------|--------------|----------------|
| Kampala | | 06 00hrs |
| Jinja | 10 00hrs | 10 30hrs |
| Iganga | 12 30hrs | 13 45hrs |
| Bugiri | 14 45hrs | 15 00hrs |
| Tororo | 16 00hrs | |
- WARNING: Not to be reproduced electronically!!**

- (a) Convert the arrival time of the train in Iganga in 12 hour clock system. (01 mark)
- (b) Find the total time taken by the train to travel from Kampala to Tororo. (02 marks)
- (c) Find the total time taken by the train on all stop overs. (02 marks)

28

Study the exchange rates below and answer the questions that follow.

1 USA dollar is equivalent to Ugs 3600

1 Kenya sh is equivalent to Ugs 3200

- (a) How much money in Kenya shillings will a tourist get from the exchange of Ug sh 1,440,000? (02 marks)
- (b) Erikson had 2800 U.S.A dollars and exchanged them to Kenya shillings. How much in Kenya shilling did he get? (03 marks)

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29 Three metal rods of length 108cm, 208cm and 560cm are cut into pieces of the same length.

(a) Find the greatest length which can be cut out of the rods without leaving a remainder. (02 marks)

(b) How many pieces can be cut from the rod with the greatest length? (02 marks)

30 The average of $y + 7$, $y + 9$, 17, 19, 25 -y and $11 + y$ is 16. Find the value of y . (03 marks)

(b) Find the median of the above data. (02 marks)

31 Matope has r cows. Nkairessery has 20 more cows than Matope. Sendeyo has 15 cows less than the total number that Matope and Nkairessery have. If they all have 85 cows altogether.

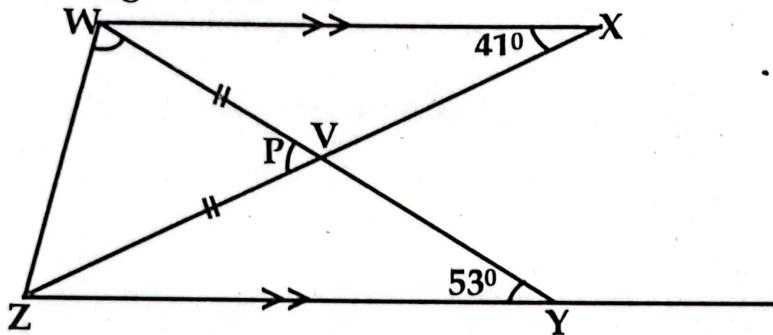
(a) Find the value of r . (03 marks)

32

(b) How many cows does Sendeyo have?

(02 marks)

In the figure below, line WX is parallel to line YZ and $WV = VZ$. Angle $WXZ = 41^\circ$ and angle $WYZ = 53^\circ$.

(a) Find the value of P .

(03 marks)

(a) Find the size of angle ZWX .

(02 marks)



Review your answers

Always make sure you read through your answers before submitting the test/exam paper. It will help you find any mistakes or questions you may have misread or misinterpreted.